RESEARCH SCHOOL

PhD Opportunity

Adoption of proprietary home and community automation technologies in support of ageing-in-place

Supervisory team
Dr Chris Bowers, Dr Chris Russell, External Supervisor TBA

Director of Studies:
Dr Chris Bowers, Digital Innovation and Intelligent Systems Research Group, University of Worcester

Supervisors:
Dr Chris Russell, Association for Dementia Studies School of Allied Health and Community University of Worcester

Research Group: Association for Dementia Studies

The PhD Opportunity
This PhD study will investigate the adoption of proprietary automation technologies used in the home or in the community by people affected by dementia.

Technology has the potential to impact significantly on the health and well-being of people affected by dementia not least in reducing social isolation and opening up opportunities for engaging in life, learning and leisure.

If everyday technology is made available rather than technology specifically designed for people living with dementia, then people will be more likely to use it as they will feel it is part of normal life rather than drawing attention to their condition and therefore being potentially stigmatising or embarrassing.

Potential areas of investigation are:

- Automation and assistance of everyday tasks.
- Cognitive support to address confusion and assist in memory recall, thinking and planning.
- Adapting the environment to account for behavioural and mood changes.
- The use of automation to support physical activity and/or health and well-being

Application Process
To begin the application process please go to: https://www.worc.ac.uk/courses/dementia-studies-mphilphd and click on 'How to Apply' in the top menu. This PhD could be carried out on a part time or full time basis so please select the relevant application link. On the application form, please make it clear that you are applying for one of our advertised projects so we can direct it straight to the relevant people.

The Interview
All successful applicants will be offered an interview with the proposed Supervisory Team. You will be contacted by a member of the Research School Team to find a suitable date. Interviews can be conducted in person or over Microsoft Teams.

Funding your PhD:
For more information about Doctoral Loans please visit:
https://www.worc.ac.uk/study/fees-and-finance/doctoral-loans.aspx

During your PhD you can access the Research Student Support Scheme to support dissemination costs associated with your research, up to £500 a year.

Research at the University of Worcester

Research is central to the University's mission to make a difference in everything that we do. We are committed to delivering excellent research which extends the boundaries of human knowledge but which also improves people's lives by enabling better health outcomes, improving food security, developing environmentally sustainable solutions for crop production and socially sustainable solutions to our ageing population, enhancing public knowledge and understanding of the past and present.

The University hence focuses its research around five high-level challenges facing society, locally, nationally and globally:

- **Human Health and Wellbeing**
- **Sustainable Futures**
- **Digital Innovation**
- **Culture, Identity and Social Exclusion**
- **Professional Education**

The success of our research is reflected in our continuous improvement in external research assessment processes. In the most recent Research Excellence Framework, REF 2021, the University saw a near 50% increase in the scale of its research and 12% increase in quality, building on its performance in REF 2014 when it was the UK's most improved university in terms of Research Power, a combination of scale and quality.

Research Degrees at Worcester
Our research students are central to our overall mission for research. They are working at the cutting edge of their disciplines and driving forward the quality of our research whilst enriching our research culture. We are looking to increase our research student numbers as a strategic imperative.

Our commitment to our students is reflected in the results of the Postgraduate Research Experience Survey 2023 in which we ranked 3rd for overall research student satisfaction nationally. Key to our success in his area is the Research School, a focal point for all our research students.

It provides:

- day-to-day support for our students, both administrative and practical, through our dedicated team
- a Research Student Study Space with both PCs and laptop docking station
- a comprehensive Researcher Development Programme for students and their supervisors
- a programme of student-led conferences and seminars

Related Research Groups

Association for Dementia Studies
The Association for Dementia Studies (ADS) was established in 2009. Our multi-professional team are experts in the field of person-centred dementia care and support.

Through research, education, consultancy and scholarship, we make a cutting-edge contribution to building evidence-based practical ways of working with people living with dementia and their families that enables them to live well. We have an outstanding track record over a wide portfolio of dementia-related research. We draw on the international evidence-base to deliver education programmes, resources and publications that empower staff to provide skilled, competent and compassionate care. People with dementia, their families and their carers inform our work at all stages.

Digital Innovation and Intelligent Systems Research Group
The Digital Innovation Research Group is focussed on the application of intelligent systems to real world problems. This incorporates the design, creation and research of technological systems that dynamically respond to the world around them to address practical issues in a wide variety of applied domains. It incorporates computational approaches such as Machine Learning, Artificial Intelligence, Modelling and Simulation, Data Mining and Pattern Recognition.

Intelligent Systems are becoming more important in everyday life as their use expands and adoption increases. With this expansion comes many key challenges that must be addressed as new application areas are found.

Uncertain - The real-world is often complex and messy resulting in noisy and inaccurate data.

Dynamic - The real-world is ever-changing resulting in a highly dynamic environment.

Computationally challenging - Some of the task's humans find easy to performance are computationally very difficult for a computer such as learning and interaction. Yet we required small compact devices to performance this on a regular basis such as mobile devices performing face-recognition.

Widening Participation

As part of its mission statement the University is committed to widening participation for its higher degrees. Although most candidates will have an undergraduate and/or a Masters degree, the University is happy to accept applications from candidates with relevant professional qualifications and work related experience.

For further information or an informal discussion on this project, please contact Dr Chris Bowers (Director of Studies) via email at c.bowers@worc.ac.uk

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